

CLAIMS:

1. An active cathodic protection system, the apparatus comprising a rectifier element with at least one electrical connection to a source of electrical current, the rectifier element associated with a direct current positive (+) output terminal for electrical connection via an anode connector to a consumable anode, a direct current negative (-) output terminal for electrical connection via a cathode connector to the structure to be protected, grounding means for electrical grounding of the apparatus and anti-cross connection means for preventing the continuing flow of electrical current when the anode connector is associated with the negative output terminal and the cathode connector is associated with the positive output terminal.
2. The active cathodic protection system according to claim 1 wherein at least one of the anode connector and the cathode connector are conductor wires, leads or the like.
3. The improved cathodic protection system according to claim 1, wherein the anode is located in the ground.
4. The improved cathodic protection system according to claim 1, wherein the anti-cross connection means is a fuse or the like located between the transformer and the negative output terminal of the system.
5. The improved cathodic protection system according to claim 4, wherein the fuse is associated with the direct current side of the transformer and rectifier element.
6. The improved cathodic protection system according to claim 4, wherein the fuse is associated with a warning lamp or light connected in parallel with the fuse, whereby when the fuse blows, the warning lamp is lit to notify users or operators of the system that the fuse has blown or a cross-connection has occurred.
7. The improved cathodic protection system according to claim 4, wherein the anti-cross connection means for preventing the continuing flow of electrical current comprises an electrical loop between a point in the system close to the negative output terminal, the grounding means for grounding the system, the cathode connector lead, and an internal jumper wire, wherein, in a cross-connection situation, both output terminals of the transformer and rectifier element are connected to the same grounding means for grounding the system, resulting in a short circuit of the fuse.
8. The improved cathodic protection system according to claim 7, wherein the electrical loop is a low resistance electrical loop.

9. The improved cathodic protection system according to claim 1, wherein the anti-cross connection means comprises a current directing diode.
10. The improved cathodic protection system according to claim 9, wherein the current directing diode is associated with the cathode connector.
11. The cathodic protection system of claim 1, comprising a cathodic protection system body, and a remotely installed plug-in type power supply module.
12. The cathodic protection system of claim 3, wherein the anode is in the form of an anode bed and is regularly moistened by installing a drip-irrigation system to regularly dispense water on top of the anode bed installation.
13. A method of transporting and installing an anode comprising of a container for holding a predetermined amount of backfill material for a particular anode hole size with the anode attached to the container, digging an anode hole corresponding to the amount of backfill material provided, placing the anode in the hole and placing backfill material from the container into the hole.
14. The method according to claim 13 wherein the container is reusable, having a screw-cap on a first end, and holding a predetermined quantity of backfill material.
15. The method according to claim 13 wherein the container includes a rigid tube with a removable end-cap that is made in a predetermined size to provide the amount of backfill that is required for the specified anode and hole size configuration, the rigid tube incorporating a handle and a strapping mechanism to attach the corresponding anode to the container holding the backfill.